REMARKS

In the Office Action mailed November 2, 2005, the Examiner indicated the Amendment filed by Applicants on July 20, 2005 was non-compliant pursuant to 37 C.F.R. § 1.121(c). Specifically, the Examiner objected to the dash between "program" and "stored" in the amended claim 32, line 2.

By this Amendment, Applicants have corrected the listing of claim 32 by removing the dash. In this paper, Applicants also resubmit the remarks session, as submitted in the filing of July 20, 2005, in its entirety.

I.   Status of Claims

In the Office Action of April 21, 2005, claims 21-24, 32, 33, 39, and 40 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter; claims 27-29 and 36-38 were rejected under 35 U.S.C. §112, first paragraph; claims 21-42 were rejected under 35 U.S.C. § 102(e) as being unpatentable by U.S. Patent No. 6,408,342 to *Moore et al.* ("*Moore*"); claims 21-26, 30-35, and 39-42 were rejected under 35 U.S.C. § 102(e) as being unpatentable by U.S. Patent No. 5,764,915 to *Heimsoth et al.* ("*Heimsoth*"). Applicants address the rejections below.

II.   Rejection of Claims 21-24, 32, 33, 39 and 40 under 35 U.S.C. § 101

The Examiner asserts claims 21-24, 32, 33, 39, and 40 are directed to non-statutory subject matter because the claims use the phrase "used by a program."

Although disagreeing with the Examiner's position, to expedite prosecution of this application (Applicants note that the Examiner has re-opened prosecution of this application following Applicants' filing of an Appeal Brief), Applicants amend these claims to indicate the program is "stored on a computer-readable medium executable by a processor." Because claims 21-24, 32, 33, 39 and, 40 are directed to statutory subject matter, Applicants request that the rejection of these claims under 35 U.S.C. § 101 be withdrawn.

III.   Rejection of Claims 27-29, and 36-38 under 35 U.S.C. § 112

Applicants traverse the rejection of claims 27-29 and 36-38 under 35 U.S.C. § 112, first paragraph because the disclosure of the subject matter in the specification complies with the enablement requirement.

The feature of "receiving a stream containing an identifier of an event listener" is properly supported by the specification. The specification, in Figure 9, describes a remote event listener 901 which receives notification of the event along with the marshaled object 913. The specification further discloses the implementation of such a remote event listener. For instance, the specification describes a "RemoteEventListenser" object both in an interface for a remote event listener as shown in Table 2, and in an interface for an event generator as shown in Table 4. Moreover, the specification explains that a "RemoteEventListenser" identifies an object registering its interest for receiving event notification or a remote event listener such as a third-party

event handler or notification "mailbox."

Thus, contrary to the Examiner's assertions, "receiving a stream containing an identifier of an event listener" is disclosed in and enabling by the specification. Therefore, claims 27-29 and 36-38 are directed to subject matter which is fully disclosed to enable one skilled in the art to make and/or use this invention. Accordingly, Applicants request that the rejections of claims 27-29 and 36-38 under 35 U.S.C. § 112, first paragraph be withdrawn and the claims allowed.

IV.   Rejections of Claims 21-42 under 35 U.S.C. § 102 (e) in View of *Moore*

In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(e), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Further, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." See M.P.E.P. § 2131 (8th Ed., Aug. 2001), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 (8th Ed. 2001), p. 2100-69.

Applicants traverse the rejection of claims 21-42 under 35 U.S.C. §102(e) based on *Moore* because the reference does not support the Examiner's assertions that the reference teaches each and every recitations in these claims. For example, in rejecting independent claim 21, the Examiner asserts *Moore* teaches deferring reconstruction of

the object until requested to perform reconstruction by the program. (OA at 6.) To support this assertion, the Examiner further refers to the process of adding a binding address to an ObjectReference as teaching deferring reconstruction of the object. *Id.* Applicants respectfully disagree.

Moore discloses a communication framework that supports multiple communications protocols (Abstract). The communication framework has at least one remote procedure call transport derived from a remote procedure call class. Each remote procedure call transport provides an implementation for an apply method whose interface is provided by the remote procedure call class (Abstract). *Moore* discloses a communication framework that implements, for example, the apply method using a conventional RPC mechanism. *Moore* discloses optionally delaying the construction of an ObjectRefence. In the process of adding a binding address to an ObjectReference, the communication framework creates a new ObjectReference 501 for a target object whenever the target object is first registered with the communication framework (col. 22, lines 32-34). Optionally, the construction of the ObjectReference 501 may be delayed until it is needed, thus avoiding any unnecessary processing associated with the creation of ObjectReference 501 (col. 22, lines 35-37).

Although *Moore* mentions optionally delaying the creation of ObjectReference 501, *Moore* does not teach or suggest deferring reconstruction of the object until requested to perform reconstruction, as asserted by the Examiner. Further, the ObjectReference

referenced by the Examiner, and disclosed by *Moore*, is not an object that is received in the form of a stream from a remote RPC mechanism, and from which its reconstruction is deferred, as alleged by the Examiner. For instance, the Examiner cites to a description in *Moore* related to an Oustream class object for support of "receiving an object in a form of a stream from a remote RPC mechanism." (OA at 5.) The Examiner then refers to the ObjectReference 501 as "the" object that is the deferred reconstruction. The Examiner contrary positions cannot be reconciled with the recitations of the claims. Accordingly, the Examiner has not shown that *Moore* discloses receiving an object and deferring reconstruction of the object, as asserted in the Office Action. For at least these reasons, the rejection of independent claim 21 under 35 U.S.C. § 102(e) should be withdrawn.

The Examiner rejects independent claims 23, 25, 30, 32, 34, 39, and 40 for the same reasons set forth in the rejection of claim 21. Although claims 23, 25, 30, 32, 34, 39, and 40 are of different scope than claim 21, the rejection of claims 23, 25, 30, 32, 34, 39, and 40 is equally unsupported by *Moore*. As explained above in connection with claim 21, *Moore* does not teach or suggest deferring reconstruction of the object until requested to perform reconstruction by the program, as asserted by the Examiner. Moreover, *Moore* does not teach or suggest transmitting an object, forming a stream out of the object, and deferring reconstruction of the object, as asserted in the Office Action. Accordingly, for at least reasons similar to those presented above in connection with

claim 21, the rejection of independent claims 23, 25, 30, 32, 34, 39, and 40 under

35 U.S.C. § 102(e) should be withdrawn.

Claim 22 depends from claim 21. Claim 24 depends from claim 23. Claim 26

depends from claim 25. Claim 31 depends from claim 30. Claim 33 depends from claim

32. Claim 35 depends from claim 34. As explained, *Moore* fails to support the rejection

of independent claims 21, 23, 25, 30, 32, 34, 39, and 40. Accordingly, it follows that

Moore does not support the rejection of dependent claims 22, 24, 26, 31,33, and 35 for

at least the same reasons set forth above in connection with claims 21, 23, 25, 30, 32, 34,

39, and 40. Thus, Applicants request that the rejection of claims 22, 24, 26, 31,33, and

35 under 35 U.S.C. § 102(e) be withdrawn and the claims allowed.

In rejecting independent claim 27, the Examiner asserts that *Moore* teaches

receiving a stream containing an identifier of an event listener and a self-describing form

of an object associated with a request for notification of a particular event within the

distributed system, and in response to occurrence of the particular event, sending the

stream to the identified event listener for reconstruction of the object using program code

identified in the stream. (OA at 9.) Applicants respectfully disagree.

Moore discloses that an RPC_Transport 305 includes a listener to receive

incoming requests for the physical media support by the protocol (col. 25, lines 52-54).

Moore further discloses that the listener is RPC_Server 315. And the listener

demarshals the object identifier, the virtual process identifier, and the operation name

associated with the incoming request (col. 25, lines 55-58). However, as shown in Figure 5 of *Moore*, the listener RPC_Server 315 is a component of RPC_Transport 305 (col. 10, lines 40-42). Therefore, there is no need for an RPC_Transport 305 to receive an identifier of the event listener 315 in the incoming requests. *Moore* does not teach or suggest receiving a stream containing an identifier of an event listener, as asserted by the Examiner.

Further, *Moore* discloses that the RPC_Transport 305 uses the information from the demarshaled object identifier, the virtual process identifier, and the operation name associated with the incoming request to create an IncomingCall instance. In *Moore*, the RPC_Transport 305, not the event listener RPC_Server 315, constructs the IncomingCall instance. Further, the IncomingCall object is created in this process, not sent and reconstructed, as asserted by the Examiner. Therefore, *Moore* does not teach or suggest sending the stream to the identified event listener for reconstruction of the object, as asserted by the Examiner. For at least these reasons, the rejection of independent claim 27 under 35 U.S.C. § 102(e) should be withdrawn.

The Examiner rejects independent claim 36 for the same reasons set forth in the rejection of claim 27. Although claim 36 is of different scope than claim 27, the rejection of claim 36 is equally unsupported by *Moore*. As explained, *Moore* does not teach or suggest receiving a stream containing an identifier of an event listener, as asserted by the Examiner. Further, *Moore* does not teach sending, in response to occurrence of the

- 16 -

particular event, the stream to the identified event listener for reconstruction of the object, as asserted by the Examiner. For at least reasons similar to those presented above in connection with claim 27, the rejection of independent claim 36 under 35 U.S.C. § 102(e) should be withdrawn and the claim allowed.

Claims 28 and 29 depend from claim 27 and claims 37 and 38 depend from claim 36. As explained, *Moore* fails to support the rejection of claims 27 and 36. Accordingly, it follows that *Moore* does not support the rejection of claims 28, 29, 37, and 38 for at least the same reasons set forth above in connection with claims 27 and 36. Thus, Applicants request the rejection of these dependent claims be withdrawn and the claims allowed.

In rejecting independent claims 41 and 42, the Examiner asserts that the "rejection of claims 21-26 under 35 U.S.C. § 102(e) (paragraphs 6.1-6.6 above) applies fully" (OA, at 10). Applicants disagree with the Examiner's position for the following reasons.

First, the Examiner improperly relies on the rejection of claims 21-26 to support the assertion that *Moore* teaches an apparatus for providing notification of an event in a distributed system including, among other things, a transmitting machine, an event generator, and an event listener that is configured to reconstruct an object by accessing program code identified in a stream. Because these features are not recited in claims 21, 22, and 25, the Examiner's position that the rejection of these claims apply to the recitations of claim 41 is improper and should be withdrawn.

Further, Applicants note that *Moore* does not teach a transmitting machine, an event generator, and an event listener that is configured to reconstruct an object by accessing program code identified in a stream, as implied by the Examiner. As explained, *Moore* describes processes that optionally delay the construction of a reference object, but fails to disclose event listeners and generators, as alleged by the Examiner. Further, *Moore* does not teach an apparatus for deferring reconstruction of an object including, among other things, a transmitting machine configured to specify an object, form a stream out of the object, and send the stream to an intermediate object, and the intermediate machine configured to send the stream to a receiving machine in response to an occurrence of an event, and the receiving machine configured to reconstruct the object by accessing program code identified in the stream. Additionally, *Moore* does not teach or suggest the above-noted features, as alleged by the Examiner. Although the cited reference may disclose optionally delaying the construction of objects, it does not teach or suggest an intermediate machine configured to send the stream to a receiving machine in response to an occurrence of an event, and a receiving machine configured to reconstructing the object by accessing code identified in the stream, as asserted by the Examiner. Because these features are not recited in claims 21, 22, and 25, the Examiner's position that the rejection of these claims apply to the recitations of claim 42 is improper and should be withdrawn.

Because the Examiner has not properly addressed the recitations of claims 41 and 42, and the cited art does not support the rejection of these claims, Applicants respectfully request that the rejections of these claims under 35 U.S.C. § 102(e) be withdrawn and the claims allowed.

V.   Rejections of Claims 21-26, 30-35, and 39-42 under 35 U.S.C. § 102 (e) in View of *Heimsoth*

In rejecting claim 21 under 35 U.S.C. § 102(e), the Examiner asserts that *Heimsoth* teaches receiving an object in a form of a stream from a remote RPC mechanism and deferring reconstruction of the object until requested to perform reconstruction by the program. *See,* OA at 11 (citing Fig. 9D; col. 30, lines 1-10; col. 29, lines 41-46; and col. 31, lines 5-18). Applicants respectfully disagree with the Examiner's interpretation of *Heimsoth*.

Heimsoth teaches an object-oriented protocol interface that establishes communication paths between endpoints in a network. According to *Heimsoth*, the interface uses the same set of protocol class objects to develop several protocol layers. The Examiner contends that the rebuilding process performed by the server taught by *Heimsoth* (in col. 29, lines 41-46. col. 30, lines 1-10, and col. 31, lines 5-18) teaches deferring reconstruction of an object until requested by a program. Applicants respectfully submit that the Examiner's interpretation of the reference is wrong.

The client-server communication process disclosed by *Heimsoth* allows an AccessOP object to be sent to a server using RPC mechanisms. The Proessoperation

function rebuilds the NetworkOperation objects when the server responds to the request that was sent (col. 30, lines 1-10). *Heimsoth* discloses a communication process that allows the rebuilding of an object sent to the server by a client using an RPC mechanism. Accordingly, *Heimsoth* merely discloses communication processes that use conventional RPC mechanisms that include object rebuilding functions. *Heimsoth* does not teach or suggest deferring the reconstruction of an object received in the form of a stream from an RPC mechanism, as asserted by the Examiner.

Because *Heimsoth* does not support the rejection of claim 21. Applicants respectfully request that the rejection of this claim under 35 U.S.C. § 102(e) be withdrawn and the claim allowed.

In an attempt to address the above arguments, the Examiner asserts that "[c]laim 21 is indistinguishable from conventional systems since the claimed deferring process does not express a reason for deferring or a timetable for deferring. Claim 21 merely states that reconstruction of the object is deferred until a program requests the reconstruction" (OA, at 14). Applicants respectfully submit that the Examiner's position that the claim requires something more to distinguish it from *Heimsoth* is wrong for at least the same reasons presented in the Supplemental Appeal Brief dated October 14, 2004, which are hereby incorporated by reference. Applicants respectfully request that the Examiner withdraw his position regarding claim 21.

- 20 -

Claim 30 is directed to a data processing system comprising elements that perform operations similar to the steps described above with reference to claim 21. Claim 39 is directed to a computer-readable medium containing instructions for controlling a data processing system to perform the method described above with reference to claim 21. As explained, the rejection of claim 21 is unsupported by the cited art. Accordingly, it follows that the rejection of claims 30 and 39 are also unsupported by the cited art and Applicants request that the rejection of these claims be withdrawn and the claims allowed.

Further, Applicants traverse the Examiner's assertion, in rejecting claim 22, that *Heimsoth* teaches "reconstructing the object using code identified in the stream, when requested to perform reconstruction by the program (Fig. 9D; col. 29, lines 41-46; col. 31, lines 5-18)" (OA, at 12). As explained, *Heimsoth* provides no support for the Examiner's contentions. Instead, the reference merely describes conventional RPC processes without discussing the reconstruction of the object using code identified in the stream when requested by a program, as alleged by the Examiner.

Claims 22 and 31 depend upon claims 21 and 30, respectively. As explained, the rejection of claims 21 and 30 is not supported by the cited art. Accordingly, it follows that the rejection of claims 22 and 31 is also unsupported by the cited art. Therefore, Applicants request that the rejection of claims 21-22 and 30-31 be withdrawn and the claims allowed.

In an attempt to reject claim 25, the Examiner asserts that *Heimsoth* teaches, *inter alia,* "deferring reconstruction of the object by the first RPC mechanism until the stream is returned from the second RPC mechanism to the first RPC mechanism in response to the occurrence of an event (Fig. 9D; col. 30, lines 1-10; col. 29, lines 41-46; col. 31, lines 5-18)" (OA, at 13). In fact, Applicants note that the Examiner cites to the same portions of *Heimsoth* that are relied upon to reject claim 21. Applicants disagree with the Examiner's interpretation of *Heimsoth.*

As explained in the arguments set forth above in connection with claim 21, *Heimsoth* describes communication processes that use conventional RPC mechanisms that include object rebuilding functions. That is, the reference discloses communication process that enable an object to be sent to a server using RPC mechanisms. Although the cited art may disclose rebuilding objects, it does not teach or suggest deferring the reconstruction of an object by the first RPC mechanism until the stream is returned from the second RPC mechanism to the first RPC mechanism in response to the occurrence of an event, as asserted by the Examiner.

In light of the above remarks, Applicants submit that the rejection of claim 25 is not supported by the cited reference. Accordingly, Applicants respectfully request that the rejection of this claim under 35 U.S.C. § 102(e) be withdrawn and the claim allowed.

Claim 34 is directed to an apparatus comprising elements that perform operations similar to the steps described above with reference to claim 25 . As explained, the

rejection of claim 25 is unsupported by the cited art. Accordingly, it follows that the rejection of claim 34 is also unsupported by the cited art and Applicants request that the rejection of this claim be withdrawn and the claim allowed.

Claims 26 and 35 depend upon claims 25 and 34, respectively. As explained, the rejection of claims 25 and 34 are not supported by the cited art. Accordingly, the rejection of claims 26 and 35 are also unsupported by the cited art. Therefore, Applicants request that the rejection of these claims be withdrawn and the claims allowed.

Claims 23, 32, and 40 include recitations similar to those of claim 21. As explained, *Heimsoth* does not support the rejection of claim 21. Accordingly, it follows that the cited art does not support the rejection of claims 23, 32, and 40 for at least the same reasons set forth in connection with claim 21. Accordingly, Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn and the claims allowed.

Claims 24 and 33 depend on claims 23 and 32, respectively. As explained, *Heimsoth* fails to support the rejection of claims 23 and 32. Accordingly, it follows that the cited art does not support the rejection of claims 24 and 33, and Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn and the claims allowed.

In rejecting claims 41 and 42, the Examiner asserts that the "rejection of claims 21-26 under 35 U.S.C. § 102(e) (paragraphs 7.1-7.6 above) applies fully" (OA, at 13). Applicants disagree with the Examiner's position for the following reasons.

First, the Examiner improperly relies on the rejection of claims 21, 22, and 25 to support the assertion that *Heimsoth* teaches an apparatus for providing notification of an event in a distributed system including, among other things, a transmitting machine, an event generator, and an event listener that is configured to reconstruct an object by accessing program code identified in a stream. Further, Applicants note that *Heimsoth* does not teach a transmitting machine, an event generator, and an event listener that is configured to reconstruct an object by accessing program code identified in a stream, as implied by the Examiner. As explained, *Heimsoth* merely describes processes that allow a server to build an object, but fails to disclose event listeners and generators as mentioned above. Because these features are not recited in claims 21, 22, and 25, the Examiner's position that the rejection of these claims apply to the recitations of claim 41 is improper and should be withdrawn.

Further, the Examiner improperly relies on the rejections of claims 21, 22, and 25 to support the assertion that *Heimsoth* teaches an apparatus for deferring reconstruction of an object including, among other things, a transmitting machine configured to specify an object, form a stream out of the object, and send the stream to an intermediate object, and the intermediate machine configured to send the stream to a receiving machine in

response to an occurrence of an event, and the receiving machine configured to

reconstruct the object by accessing program code identified in the stream. Additionally,

Heimsoth does not teach or suggest the above-noted features, as alleged by the

Examiner. The server may also rebuild an object sent to it by a client using an RPC

mechanism. Although the cited reference may disclose rebuilding objects, it does not

teach or suggest an intermediate machine configured to send the stream to a receiving

machine in response to an occurrence of an event, and a receiving machine configured

to reconstructing the object by accessing code identified in the stream, as asserted by the

Examiner.

Because these features are not recited in claims 21, 22, and 25, the Examiner's

position that the rejection of these claims apply to the recitations of claim 42 is improper

and should be withdrawn.

Because the cited art does not support the rejection of claims 41 and 42, and the

Examiner again fails to properly address these claims, Applicants respectfully request

that the rejection of these claims withdrawn and the claim allowed.

Applicants note the Examiner's attempt in addressing Applicants' arguments

regarding the failure of previous Office Actions to address the recitations of claims 23-26,

32-35, and 39-42. While finally acknowledging the Applicants' concerns regarding the

Examiner's rejections of these claims, the Examiner again misses the mark. Notably, in

responding to Applicants' concerns the Examiner refers to one claim ("[c]laim 25 was

explicitly rejected on 1/30/2004 p. 3, item 2.3)" (OA at 13), and again refers to claim 21 in an attempt to address the recitations of claims 23-26, 32-35, and 39-42 (OA at 14). While the Examiner did provide a "more detailed rejection with regard to Heimsoth," the description still falls short of addressing the recitations of claims 23-26, 32-35, and 39-42 with regard to that reference. Accordingly, Applicants again submit that the rejection of these claims are improper and should be withdrawn.

VI.   Conclusion

The rejection of claims 21-42 should be withdrawn because cited references do not support the rejection of these claims, as asserted by the Examiner. Accordingly, Applicants request the Examiner's reconsideration of the application in view of the foregoing, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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